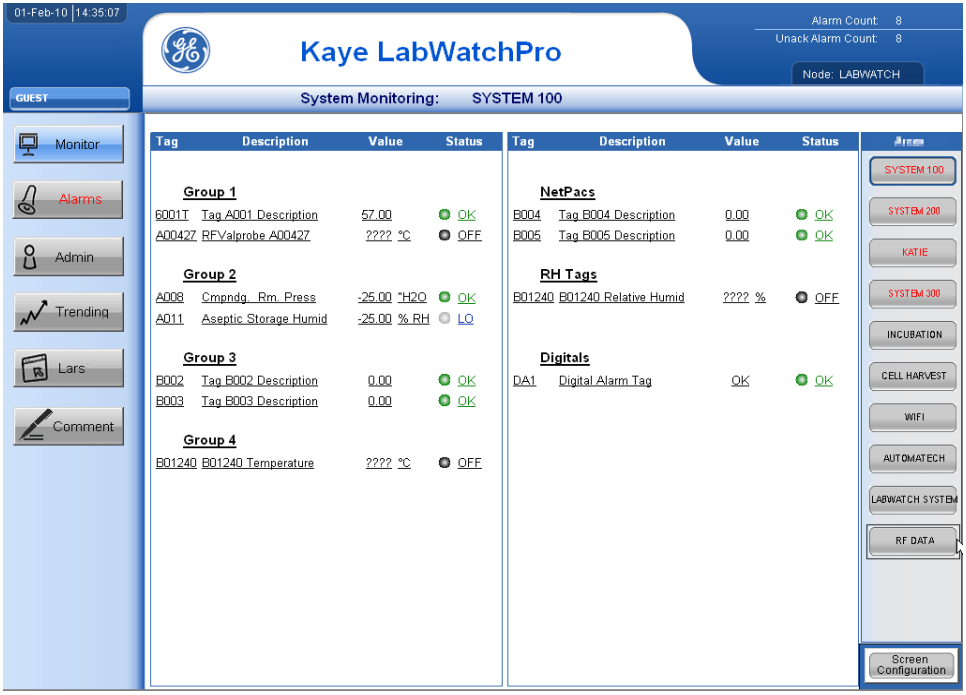
GE

Measurement & Control Validation

# LabWatch Pro™

## User's Manual

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M4575 Rev. B
April 2012

GE
Measurement & Control

# LabWatch Pro™

## *Monitoring Software System*

**User's Manual**

**M4575 Rev. B**
**April 2012**

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# Chapter 1. The LabWatch™ Pro Monitoring System

The LabWatch Pro monitoring software system integrates sensors, measurement hardware and networked PCs into a comprehensive solution for laboratory, warehouse and stability monitoring. Customers can incorporate wired and wireless sensors for differential pressure, relative humidity, temperature, contact closure, $CO_2$, and any device that outputs an analog or digital signal. They can also add, replace or delete sensors as a facility expands or changes.

LabWatch Pro software combines three functions. The system monitoring software (iFIX Proficy) allows users to perform real-time monitoring of groups of sensors, with color coding to indicate alarm levels. Users can click on individual sensors for more detailed information on trending, tabular data and alarm configuration. The Alarms screen provides lists of recent alarms, and the Trending screen allows users to chart individual historical and real-time group trends. For system administration, the Admin screen provides access to help files and user guides. The iFIX System Utilities option equips system administrators to revise operator lists, save and reload databases, and check configuration files. For every change executed, LabWatch Pro creates an audit trail. All comments are held in a secure encrypted file that becomes part of the permanent record, archived to a secure audit trail in compliance with 21 CFR Part 11.

To signal personnel immediately when alarm events occur, LabWatch Pro provides alarm notification in a variety of ways via the Win 911/411 system:

- A flashing area on main screen shows the alarm location and details the alarm condition
- An optional audible alarm at the main viewing terminal
- Automatic dialing/emailing from a priority list that calls personnel via telephone or e-mail
- User dial-in from a remote site to inquire about system status.

Automatic dialing for remote personnel allows LabWatch Pro to deliver a message using text to speech messaging to notify the recipient of the alarm description and condition. An administrator can arrange the calling list in a cascading fashion to ensure the most efficient response to alarm situations.

For report creation, the LabWatch Alarm Report System (LARS) allows you to create reports from secure encrypted files. Users can generate five types of reports: real-time, historical, value, Max/Min/Avg, and Mean Kinetic Temperature (MKT). A query function provides access to any type of Audit Trail reporting, from complete reports over any time period to specific reports focused on a particular system point or event.

To control user access, a system administrator grants access privileges and maintains the operator list. Each user receives an individual user ID and password combination that allows entry at the appropriate security level.

# Chapter 2. Starting LabWatch Pro

## 2.1 Entering LabWatch Pro

Normally, a customer may receive LabWatch Pro installed as a turnkey system on a customized PC. (If you need to install or reinstall the program, refer to Appendix A.) To open LabWatch Pro, click on the iFIX icon on the desktop screen. A splash screen briefly appears, and then the System Monitoring screen opens, as shown in Figure 1 below.

## 2.2 The System Monitoring Screen

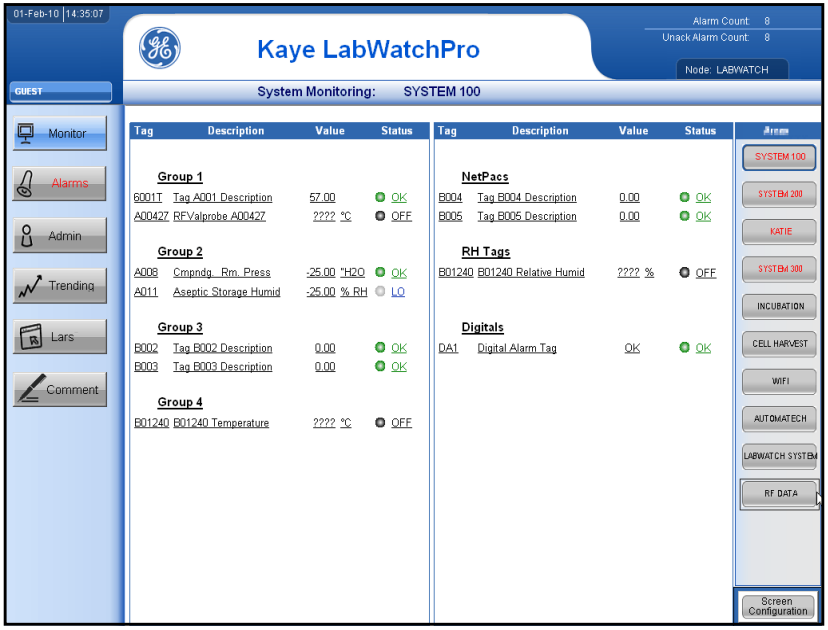


**Figure 1: The LabWatch Pro System Monitoring Screen**

The System Monitoring screen provides a concise overview of the alarms covered by the various groups that make up a LabWatch Pro system. The header (Figure 2 on the next page) lists the program name, date and time, the user who is currently logged in, the current area, the number of inputs in an alarm state, the number of unacknowledged alarms, and the node name.

## 2.2 The System Monitoring Screen (cont.)

**Figure 2: Header with Time, Date, User Name, Current Screen, Alarms and Node**

To the right of the screen, the Areas series of buttons lists the user-assigned alarm areas that comprise the node. When you click on any of these buttons, you can survey the status of the alarms assigned to this group in the center of the screen. Via the Configuration Utility in the Admin screen, users can create up to 12 individual alarm areas with up to 50 lines each, including headers, tags or spaces in two columns of 25 lines.

The alarm columns include Tag, Description, Enabled (whether the alarm is enabled or not), Value (the current value for the alarm), and the Status. Various alarm statuses are color-coded:

- red for Hi (High)
- brown for HiHi (High High)
- blue for Lo (Low) sensor alarm and low battery alarm
- aqua for LoLo (Low Low)
- magenta for an open circuit (disconnected sensor).
- yellow for loss of communication with the I/O.
- green will be the normal condition color.

For digital alarms, the message CFN indicates a change from the alarm's normal state, while COS indicates a change in alarm condition (for example, if communications areinterrupted).To alter the description or status of a given tag, click on the tag to open the Tag Maintenance screen. Here you can review trends and tabular data, and edit the tag description, calibration data and alarm data.

To edit the entire current group screen, you can click on the Screen Configuration button in the lower right corner. The Alarm Area Configuration window opens, listing the unassigned tags, and the tags on the left and right sections of the System Monitoring screen. In this window, users can move tags from one pane to another, higher or lower in the listing, and on or off the System Monitoring screen.

## 2.2 The System Monitoring Screen (cont.)

At the left of the screen, six buttons enable navigation among the major areas of the LabWatch Pro program.

- The **Alarms** button, normally blue, flashes red if LabWatch notes a new alarm, or turns solid red for an acknowledged alarm. Clicking this button opens the Alarms window (Figure 12 on page 21), in which you can review and acknowledge alarms, and add comments to the audit trail.
- The **Admin** button opens the System Administration screen (Figure 19 on page 29), which offers access to a series of help files and user guides for System Administration, System Operation, the Proficy Historian, Win 911/411, I/O Driver, and LARS (the LabWatch Alarm Reporting System). Users can also access (upon appropriate identification) administrative utilities for LabWatch and Win 911/411. Here they can enter, modify, or delete user or group information; save, reload or manage a database; and check other controls. The Alarm color key displays various colors that indicate alarm status. Finally, the User Functions buttons enable user login, logout, and entry of comments into the audit trail. Refer to Chapter 5, *Administrative Functions*, for more details.
- The **Trending** button opens the Trending screen (Figure 14 on page 23), which shows a generic trend, and allows users to pinpoint the data at a specific point on the trend. Users can apply trend templates, and create and modify real-time and historical trends.Refer to Chapter 4, *Monitoring Alarm Trends*, for more details.
- The **LARS** button opens the LARS (LabWatch Alarm Reporting System) utility for reviewing audit trail information and creating reports of historical data.reports. Users can generate five types of reports from secure, encrypted files: real-time, historical, value, Max/Min/Avg, and Mean Kinetic Temperature (MKT). For more information, refer to the LARS HELP file.
- The **Comment** button allows authorized users to enter comments into the audit trail.
- From these other screens, the **Monitor** button enables returning to the System Monitoring screen.

## 2.3 Logging into LabWatch Pro as a Specific User

When LabWatch opens, the user is signed in as "Guest." In this mode, you can view the LabWatch screens, but you cannot acknowledge alarms, enter comments, or change parameters. To perform these functions, you must be an authorized user assigned to a specific level. LabWatch Pro offers three user-configurable default levels: Operator, Supervisor and Administrator. For a given system, administrators can specify the security areas and particular functions (from over 30) available for any user authorized to access the system.

To log in with a specific user name and password, click on the current login name button in the top left corner. (You can also click on the Admin button and log in on the System Administration screen.) The Log-in window opens (Figure 3 below).

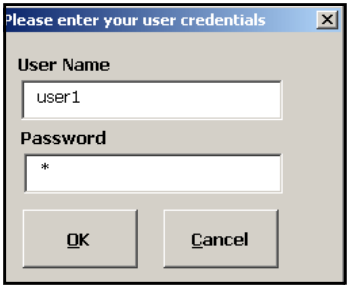


**Figure 3: Log-in Window**

Enter your assigned user name and password. The System Monitoring screen will reopen with your user name replacing "Guest" in the upper left.

## 2.4 Viewing Data on Specific Tags

To review data on a specific tag (alarm), click on the tag number on the System Monitoring screen. The Tag Maintenance window opens (Figure 4 below).

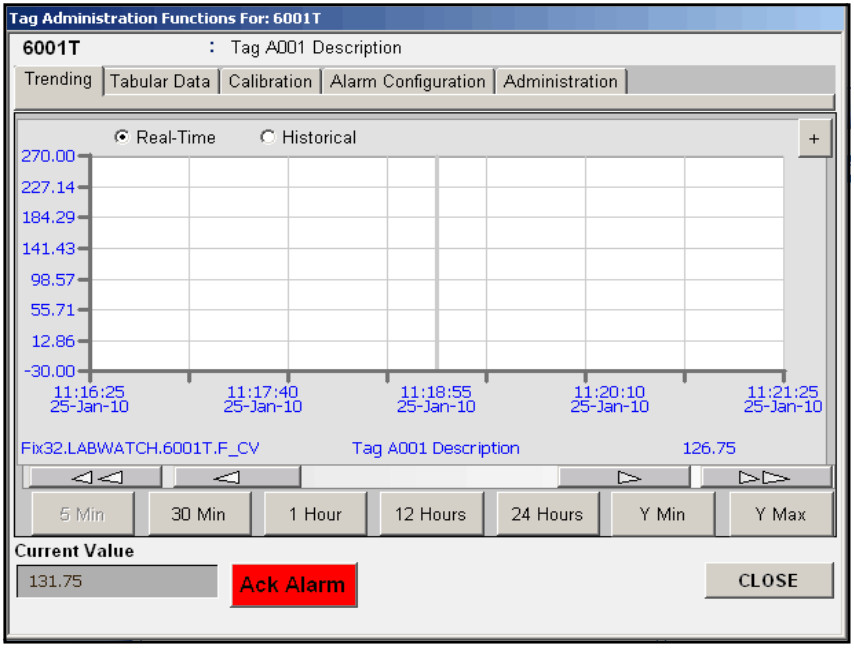


**Figure 4: Trending Tab in the Tab Maintenance Window**

### 2.4.1 The Trending Tab in Tag Maintenance

The tab that initially appears, **Trending** (Figure 4 above), opens a live trend of the selected point. It appears blank when first opened, but then updates at one minute intervals. At the top of the screen, it displays the tag name and description. If the tab remains open, it continues to collect and display data, allowing scrolling in the predetermined minutes. If you move the cursor to a particular point on the graph, a popup displays the date, time and value for a specific point.

If you click the **Historical** option button in the upper left, the trend changes from real-time data to stored historical files. If you click the **Real-Time** button, the screen becomes blank and then returns to displaying real-time data.

## 2.4.1 The Trending Tab in Tag Maintenance (cont.)

Clicking the plus sign button in the upper right corner enables you to add another sensor to the display while this tab is open. You can search for another tag by Node Name, Tag Type (checking boxes for the desired tag type), or by using the **Search** button. Under "Search Files Option," you can click on the Tag Name or Description option button. Then click **Search**. The pane below fills with a list of the corresponding tags. Highlight the desired tag and click **OK.** The second tag and its value then appear beneath the first at the bottom of the Tag Maintenance screen.

The buttons below the tag listing(s) enable you to configure the appearance of the graph. You can select time intervals of 5 minutes, 30 minutes, 1 hour, 12 hours or 24 hours. The **Y Min** and **Y Max** buttons allow you to set minimum and/or maximum ranges for the Y axis. Clicking on either button opens the Numeric Keypad Entry window, where you can either type a value into the text box or click on the pad numbers to enter the minimum or maximum value, and then click **OK.**

At the bottom of the screen, a box displays the current value for the tag. If the value shown is out of range, you can click the **Ack Alarm** button (if you have appropriate permissions) to acknowledge the alarm.

***Note:*** *If a user changes the LabWatch Pro database, both trending and tabular data may be interrupted for a particular tag.*

### 2.4.2 Tabular Data in Tag Maintenance

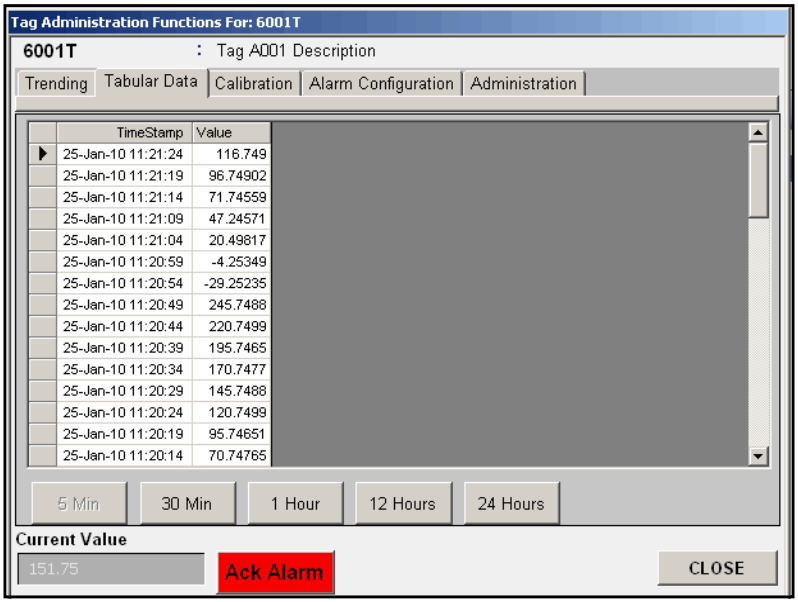


**Figure 5: Tabular Data Tab**

The second tab, **Tabular Data (**Figure 5 above), presents the real-time data for the tag in a Date/Time and Value table for the tag data. Buttons at the bottom of the tab enable you to display data over the past 5 minutes, 30 minutes, 1 hour, 12 hours or 24 hours. You can display the data in increments that vary with the time period selected:

- For 5 min, 5 sec increments.
- For 30 min, 30 sec increments
- For 1 hour, 1 min increments
- For 12 hours, 1 min increments
- For 24 hours, 30 min increments

***Note:*** *While you can change the data display, you cannot change the actual data in this window. Also, if a user changes the LabWatch Pro database, both trending and tabular data may be interrupted for a particular tag.*

### 2.4.3 Calibrating Tags

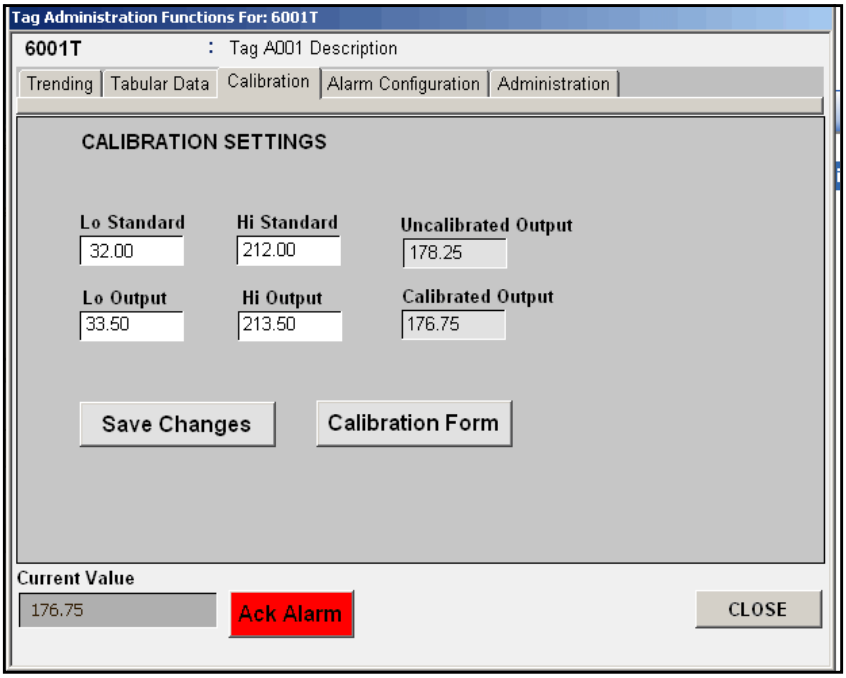


**Figure 6: The Calibration Tab**

The **Calibration** tab allows you to adjust calibration values for the displayed tag, if you have the appropriate privileges. Six text boxes, shown in Figure 6 above, display the current values for Lo Standard and Output, Hi Standard and Output, and Uncalibrated and Calibrated Output. To enter a different value, click on the particular box. The Numeric Keypad Entry window opens, and you can either type a value into the text box, or click on the pad numbers to enter the adjusted value. Click **OK**. Confirm the entry by entering a comment and your user name and password in the Electronic Signature window. When you have finished entering values, click **Save Changes**.

To use the calibration utility, click the **Calibration Form** button. The Change Calibration Settings window opens. Use the option buttons to choose between single and two-point calibration.

## 2.4.3 Calibrating Tags (cont.)

- For single-point calibration, you must enter the Calibration Offset (Figure 7 below).

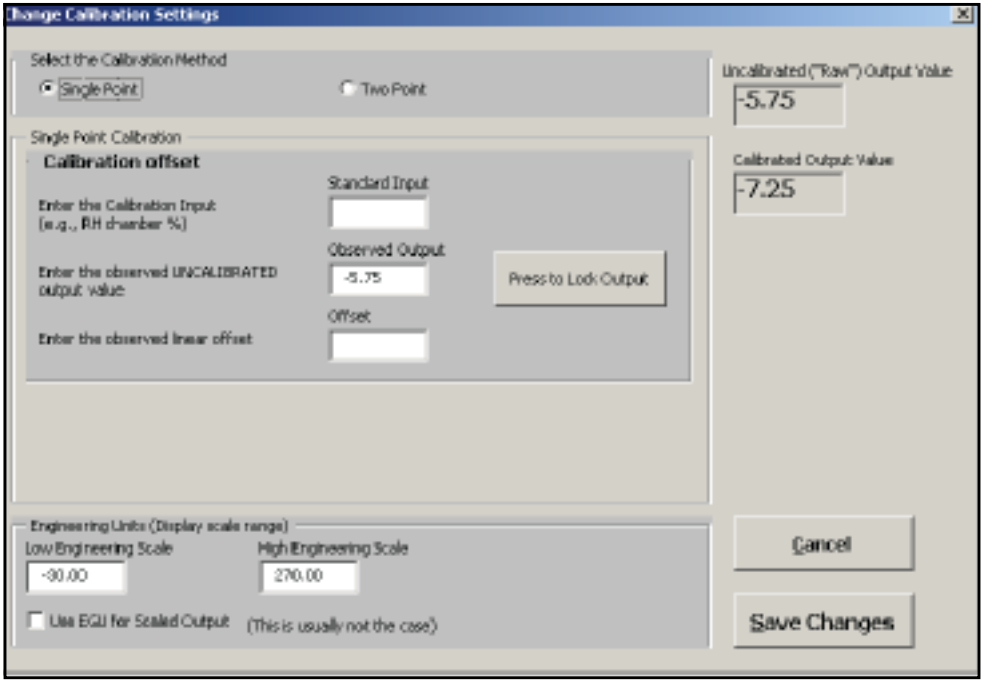


**Figure 7: Single-Point Calibration**

1. In the Standard Input text box, enter the Calibration Input.
2. In the Observed Output text box, enter the observed uncalibrated output value.
3. In the Offset box, enter the observed uncalibrated output value listed in the box at the upper right of the screen.
4. Click the **Press to Lock Output** button.

***IMPORTANT:*** *Do not change the engineering units unless you are changing the sensor type.*

## 2.4.3 Calibrating Tags (cont.)

- For two-point calibration, you must enter Low and High Point calibration data (Figure 8 below).

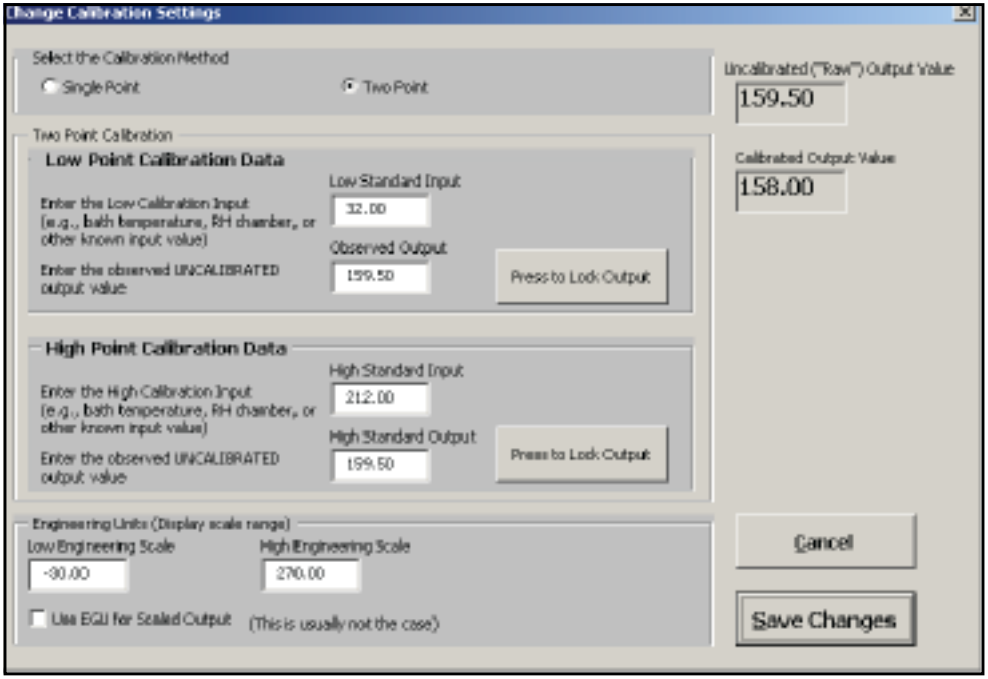


**Figure 8: Two-Point Calibration**

1. First, enter the Low Standard Input.
2. In the Observed Output box, enter the observed uncalibrated output value from the box in the upper right corner.
3. Enter the High Standard Input.
4. In the High Standard Output box, enter the observed uncalibrated output value from the box in the upper right corner.
5. Click the **Press to Lock Output** button.

## 2.4.3 Calibrating Tags (cont.)

***IMPORTANT:*** *While you can enter the display scale range for the low and high engineering units, do not change these units unless you are changing the sensor type. If you are changing the sensor type, enter the desired values in the text boxes. If you want to use these units for scaled output, click on the check box below the text boxes.*

When you have finished, click **Save Changes** to save the new settings, or **Cancel** to exit without changing.

### 2.4.4 Configuring Alarms

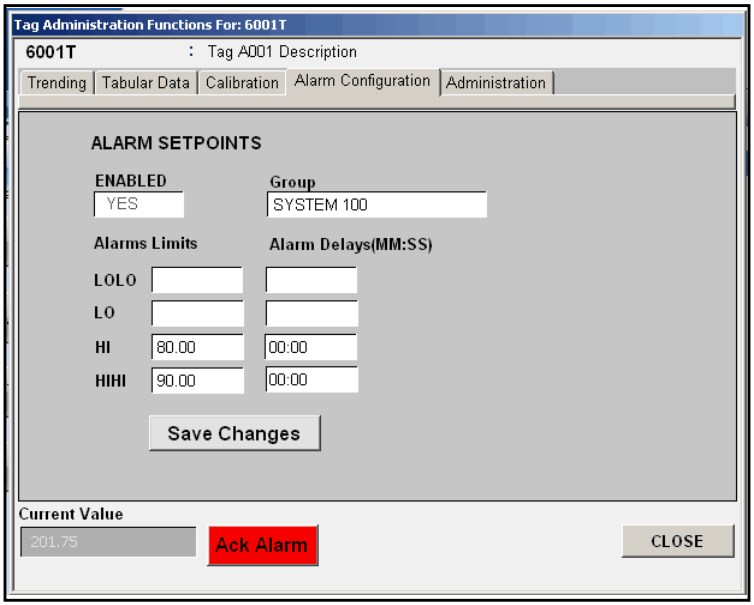


**Figure 9: Alarm Configuration Tab**

The **Alarm Configuration** tab (Figure 9 above) allows you to set alarm parameters for this tag (again, if you have the appropriate privileges).

Two low alarms, LO and LOLO, create an alarm on the screen that appears in the audit trail if a value drops below the preset value. Since they are independent limits, a user has two different thresholds for alarming. (Typically, the LOLO value is set lower than the LO value to indicate that a condition has become worse. For certain input types, (i.e., 4-20 mA on Netpac), the limit may also indicate an open circuit alarm.

Two high alarms, HI and HIHI, create an alarm on the screen that appears in the audit trail if a value rises above the preset value. Since they are independent limits, a user has two different thresholds for alarming. (Typically, the HIHI value is set higher than the HI value to indicate that a condition has become worse.) For certain input types, (i.e., RF), the limit may also indicate an open circuit alarm. You can apply any condition or combination of alarm limits.

## 2.4.4 Configuring Alarms (cont.)

To set an alarm value, click on the particular box. The Numeric Keypad Entry window opens, and you can either type a value into the text box, or click on the pad numbers to enter the adjusted value. Click **OK**. Confirm the entry by entering a comment and your user name and password in the Electronic Signature window, and click **OK**.

Along with values, users can set a delay period (in minutes and seconds, up to 50 minutes) of the time an alarm condition occurs before triggering an alarm on the screen. To set a delay value, click on the particular alarm delay box. The Numeric Keypad Entry window opens, and you can either type a value into the text box, or click on the pad numbers to enter the adjusted value. Click **OK**. Confirm the entry by entering a comment and your user name and password in the Electronic Signature window, and click **OK**.

The Alarm Enabled box indicates whether the alarm for this tag is enabled or disabled (that is, will activate or not). To change the alarm status, click on the box. The Update Initial Alarm Enabled Status window opens. Click on the **Enabled** or **Disabled** button to change the alarm status Click **OK** to confirm the change, or **Cancel** to cancel it. If you click **OK**, confirm the entry by entering a comment and your user name and password in the Electronic Signature window, and click **OK**.

The Alarm Area box displays the area in which the tag appears. To assign the tag to a different or new area, click on the box. The "Configured Alarm Areas" window opens, with a list of all the available areas in the "Select an Existing Alarm Area" pane. Click on the desired area for the tag to appear in that area.

You can also create a new group (area) for the tag. Type the name for the new area in the "Create a New Alarm Area" box, and click **OK**. If you click **OK**, confirm the entry by entering a comment and your user name and password in the Electronic Signature window, and click **OK**. To update the System Monitoring screen, click twice on the Monitor button.

***Note:*** *While a tag can be in two or more areas, the tag will only display an alarm in the primary area.*

At the bottom of the screen, a box displays the current value. If the value is out of range, you can acknowledge the alarm by clicking the **Ack Alarm** button.

### 2.4.5 Administering Tags

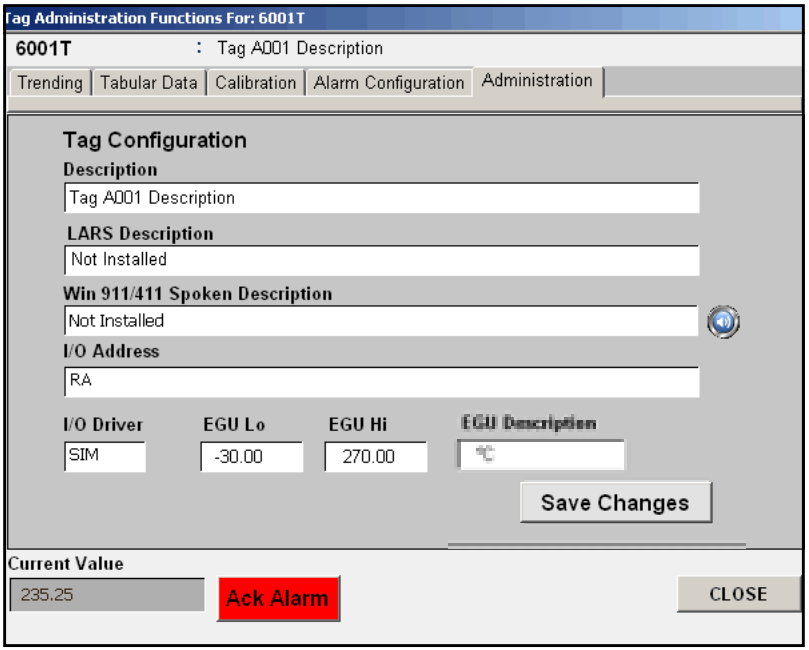


**Figure 10: The Administration Tab**

The Administration tab (Figure 10 above) allows you to configure the tag description, I/O driver and I/O address. You can change the tag description in separate lines:

- **Tag Description:** This description appears in the audit trail and on the System Monitoring screen.
- **LARS Description**: This description appears as the Tag Name at the top of Reports.

***Note:*** *Changing the LARS tag from this window will not create a backup of the current tag name.*

- **Win 911/411 Spoken Description:** This description alters the sound played from the alarm dial out program.

## 2.4.5 Administering Tags (cont.)

- **I/O Driver:** You can change the name of the I/O Driver; however, you should only change the driver if you are changing the hardware type:
  - OPC for RF ValProbe
  - Net for Netpac
  - Sim for System Testing
- **EGU:** Three boxes show the low and high engineering units (EGU) and the EGU description for the I/O Driver.
- **I/O Address:** You can change the I/O address within the database. You would change the address when moving an RF ValProbe sensor to a new location. (See Appendix A, *The RF ValProbe Sensor Location Structure.)*

To change any of these boxes, click on the box, and type in (or use the key buttons) to enter the new data, and click **OK**. Confirm the entry by entering a comment and your user name and password in the Electronic Signature window, and click **OK.** When you have finished entering data, click the **Save Database** button.

## 2.5 Changing the System Monitoring Display

If you need to change the appearance of the System Monitoring screen, click on the **Screen Configuration** icon at the bottom of the System Monitoring screen. The System Monitoring Configuration window (Figure 11 below) displays up to 25 individual tags, headers or spaces in each of two user-configurable columns.

**Figure 11: Screen Configuration Window**

At the left, the Available Tags pane lists inputs assigned to the current alarm area, but not currently displayed. At the right, the Process Monitoring Screen Display columns list, by tag name, the inputs currently displayed on the left and right sections of the System Monitoring screen.

## 2.5 Changing the System Monitoring Display (cont.)

In this window, users can move tags from one pane to another, higher or lower in the listing, and on or off the System Monitoring screen.

- To move a tag from one column to another, click on the tag, hold down the mouse key, and drag it to the desired pane.
- To add a section header, type it into the "Group Title or Description" box and click on the button.
- To add spaces after a group of tags, click on the button.
- To position a tag, header or space, highlight the object and click the or buttons until you have reached the desired position.
- To delete a tag, header or space, highlight the object and click the button.

***Note:*** *If you delete a tag, it will not reappear in any column until you close and reopen the configuration screen.*

- To move all points to the Available tag list, click the **Reset Form** button.
- To move all tags to the left column *on this group,* (eliminating all headers and spaces), click the **Reset this Area** button.
- To move all tags to the left column *on all System Monitoring groups* (eliminating all headers and spaces), click the **Reset All Areas** button.

***IMPORTANT:*** *Clicking **Reset Form** will return all tags in one group to the Available Tags pane. In consequence, the System Monitoring group screen for that group will appear blank until it is reconfigured.*

When you have completed setting up the screen, click **Save Layout** to save the configuration on the System Monitoring screen, or **Cancel** to return to the System Monitoring screen without saving the changes. If you click **Save Layout,** the System Monitoring screen reopens with the changes made for that group.

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# Chapter 3. Handling Alarms

The Alarms screen, shown in Figure 12 below, displays a list of the current acknowledged and unacknowledged alarms received by LabWatch Pro over a specified period. The columns list whether a given alarm has been acknowledged, times for the beginning and end of each alarm, the node and tag name of the alarm, the type of alarm, its value, the tag description, and the area (group) to which the alarm has been assigned.

**Figure 12: The Alarms Screen**

***Note:*** *To adjust alarm settings, return to the System Monitoring screen, click on a tag and then enter the Alarm Configuration tab (page 14).*

## 3.1 Acknowledging Alarms

To acknowledge the alarms through LabWatch Pro, click the **Acknowledge Alarms** button. The Filtered Alarms window (Figure 13 below) opens, displaying the list of alarms with check boxes.

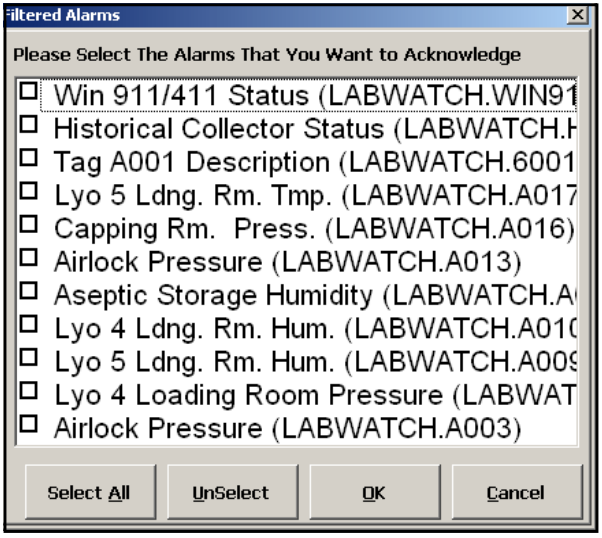


**Figure 13: The Filtered Alarm Window**

- To acknowledge specific alarms, click on the checkbox next to the specific alarm(s)
- To acknowledge all the listed alarms, click the **Select All** button.
- To deselect any or all alarms, click the **UnSelect** button.

When you have finished selecting alarms, click **OK**. The Electronic Signature window opens. Enter a comment, and confirm the comment with your assigned user name and password. Then click **OK** to acknowledge the alarm (or **Cancel** to exit the window without acknowledging the alarm).

The Alarms screen now displays the list of acknowledged alarms in green type, with checks alongside. Any unacknowledged alarms remain unchecked, in red type.

# Chapter 4. Monitoring Alarm Trends

By storing live sensor data at regular intervals, LabWatch Pro enables users to study graphical process trends for custom groups of tags (which do not need to correspond to the groups on the System Monitoring screen). You can view multiple parameters on the Trending screen for any time period selected. When you move the cursor to a point on the graph, you can see the value at the instant selected. You can also zoom in or out to obtain a historical overview of the minimum, maximum or average of the process. From the System Monitoring screen, click the blue **Trending** button to open the Trending screen (Figure 14 below).

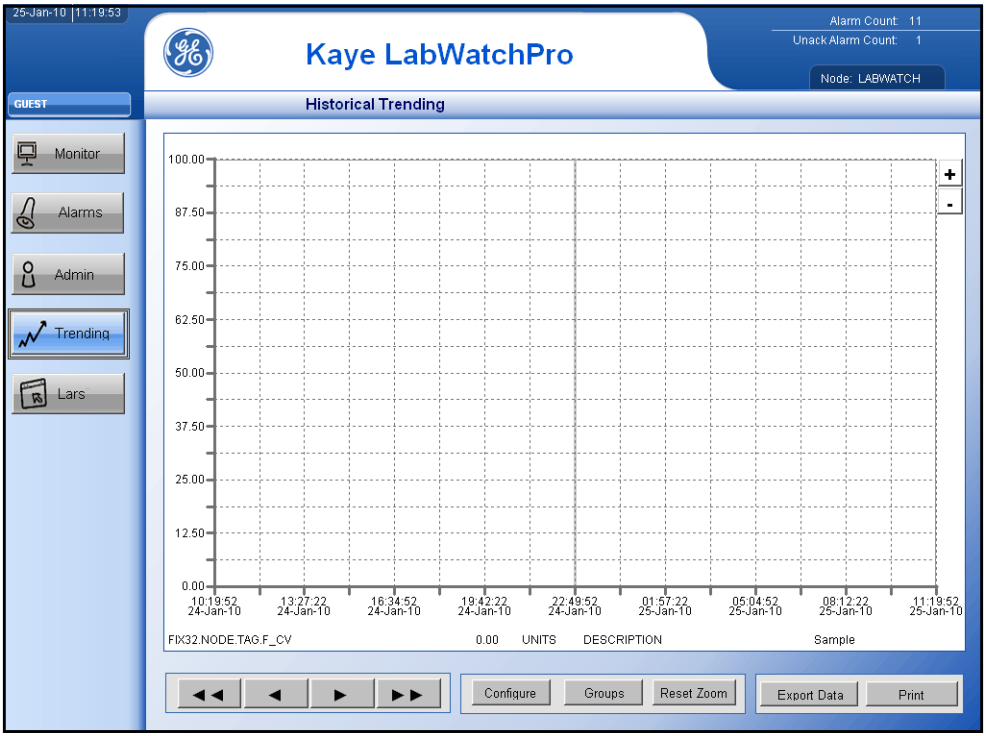


**Figure 14: The Trending Screen**

## 4.1 Setting Trending Parameters

To set the chart parameters, click the **Configure** button at the bottom of the screen to open the Trend Chart Configuration screen (Figure 15 below). You can then set chart start date and time, duration, and sampling mode.

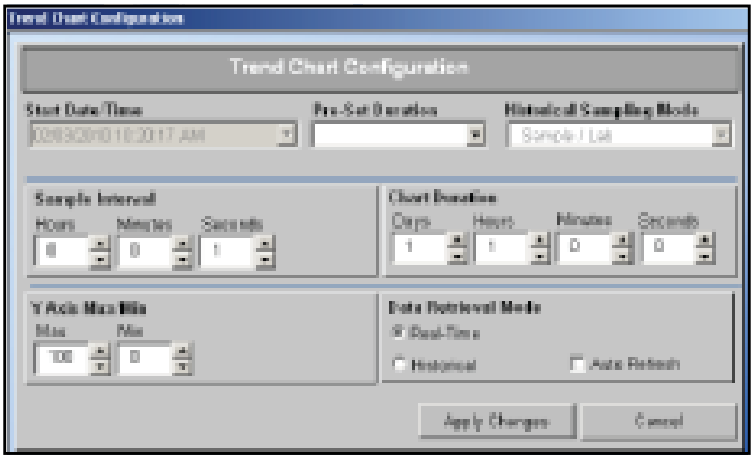


**Figure 15: Trend Chart Configuration Screen**

Various options enable you to configure the appearance of the trending graph.

- The **Start Date/Time** drop-down menu permits you to select the date and time with a specified date and time for a historical trend that trending begins.
- The **Pre-Set Duration** drop-down menu offers time intervals for the chart from 5 minutes to 30 minutes, 1 hour, 2 hours, 12 hours, 1 day, 2 days, 1 week or 1 month.
- The **Historical Sampling Mode** drop-down menu lists various modes: sample/lab, high and low value, average and interpolated.
- At the bottom of the screen, a series of text boxes enables entering a specified **Sample Interval** (in hours, minutes and seconds), **Chart Duration** (in days, hours, minutes and seconds) and **Y Axis Max/Min** values. Use the up/down arrow keys to scroll to the desired value, or type the value in the text box(es).

## 4.1 Setting Trending Parameters (cont.)

- The **Data Retrieval Mode** menu allows you to select either real-time or historical trending by clicking on the appropriate option button.

After you have entered the desired parameters, click **Apply Changes** to apply the changes to the Trending screen. LabWatch Pro returns to the Trending screen, with the changes applied.

## 4.2 Viewing Trending Parameters

To view parameters, click the **Groups** button in the lower right corner. The Chart Group file window (Figure 16 below) opens with a list of existing chart group files. Highlight an existing file, and click **Apply**. LabWatch Pro returns to the Trending screen, with the list of assigned tags (each in a separate color) below the chart.

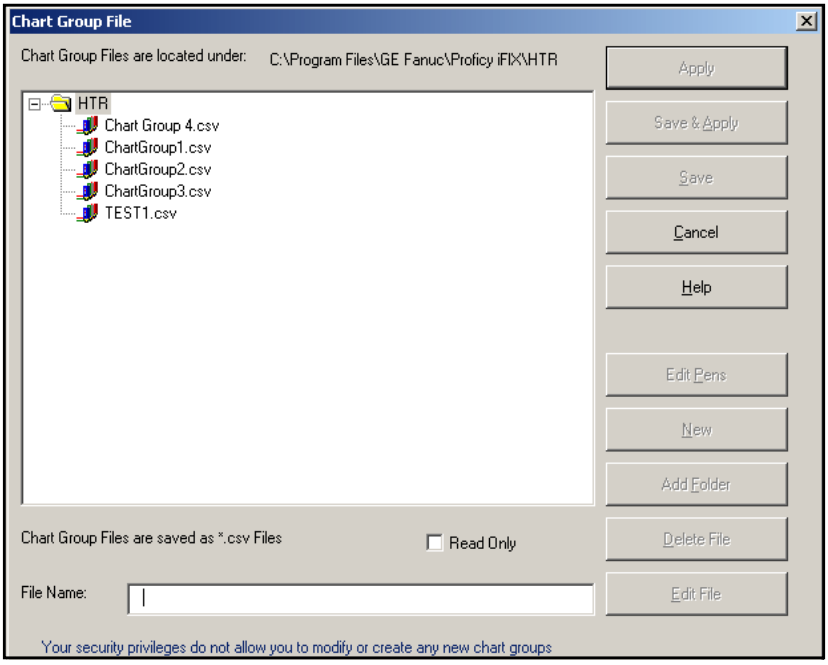


**Figure 16: Chart Group File Window**

To create a new chart group file from the Trending screen:

1. Click **Groups**. The Chart Group File window appears.
2. Click the **New** button. The Chart Group Configuration window opens.
3. Highlight the pen list you want to use. Then configure the pen(s).
4. Click **Apply Pens** to apply any pen changes. Then click **Save** to save changes to an existing chart group file, or **Save As** to create a new chart group file.
   The Chart Group File window reopens with the new chart group added.

## 4.2 Viewing Trending Parameters (cont.)

If you want to add another tag to the trending screen, click the plus-sign button at the upper right. The Select Tags to Add to Chart window (Figure 17 below) opens.

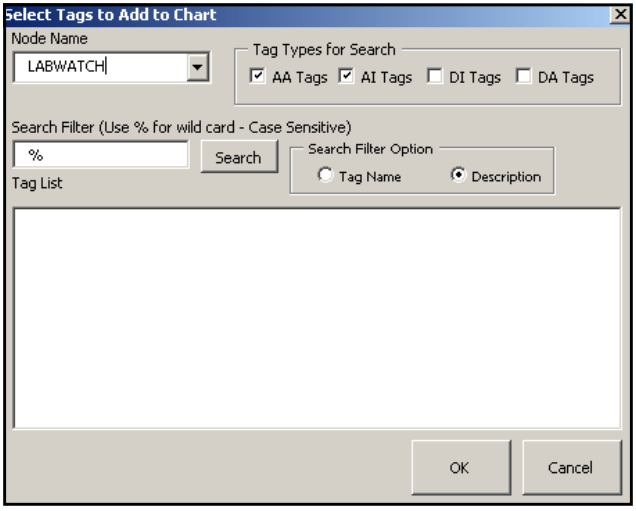


**Figure 17: Select Tags to Add to Chart Window**

You can search for a particular tag by name or description by clicking on the appropriate option button. For a more specific search, click a checkbox for a particular tag type (AA or DA) or enter search parameters in the text box. Then click **Search**. The Tag list in the pane below fills with tags that match your search criteria. Click on the desired tag, and click **OK**. The second tag appears below the first tag on the Trending screen. To remove the second tag, click the minus sign button.

Clicking on a tag name displays the trend for that particular tag on the chart, and the x and y axes are now the color assigned to the chart. If you move the chart cursor to a particular point, the date, time and value for the assigned tags pop up on the chart.

***Note:*** *Right-clicking on the tag opens a menu with two options, Tag Status and Quick Trend. These options are not supported in LabWatch Pro.*

## 4.2 Viewing Trending Parameters (cont.)

Click the **Reset Zoom** button to return to the original view of the graph. If you want to print the graph, click **Print.** LabWatch prints the screen using Microsoft Office Document Image Writer.

When you have completed making changes, click **Apply Changes** to modify the graph. To export the data, click **Export Data.** The Export File Name window opens (Figure 18 below).

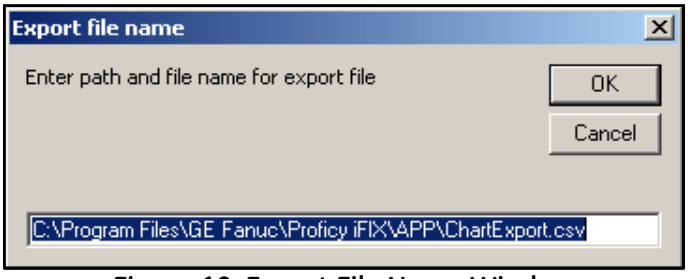


**Figure 18: Export File Name Window**

You can accept the default path and file name, or enter another path and file name, and click **OK.** LabWatch saves the exported file in .csv format at the specified location.

# Chapter 5. Administrative Functions

Occasionally, users might need to alter LabWatch Pro parameters: to change the system configuration, add or delete tags, add or delete users (or even groups of users), and save or reload the LabWatch database. They might also need information on the programs that supplement LabWatch: Proficy Historian, Win 911/411, LARS and the I/O drivers. For these purposes, they can access the System Administration screen, shown in Figure 19 below, by clicking the **Admin** button from the System Monitoring, Alarms or Trending screens.

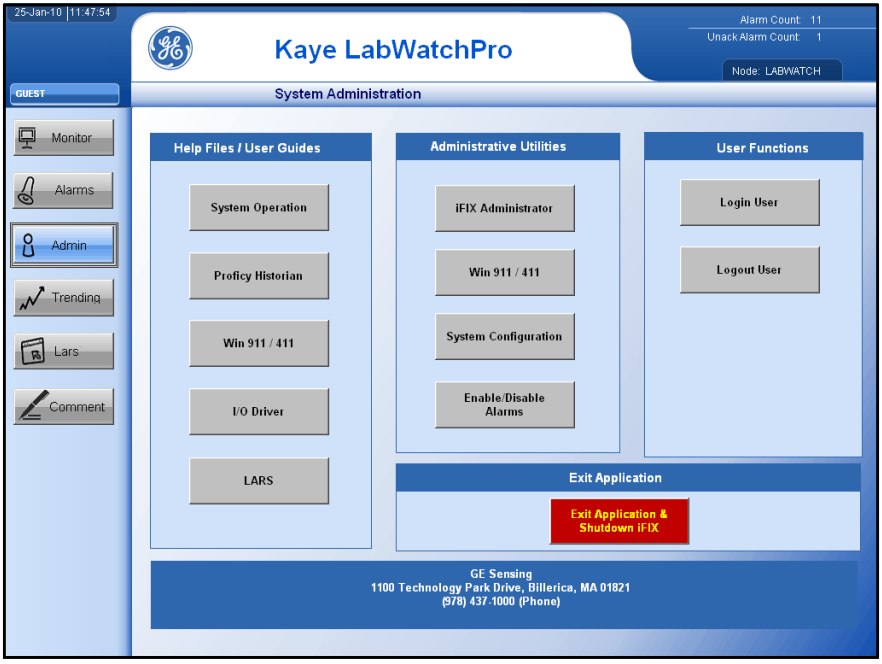


**Figure 19: The System Administration Screen**

## 5.1 Help Files

On the left, the System Administration screen offers access to a series of help files and user guides:

- The **System Operation** button opens the LabWatch Pro help file.
- The **Proficy Historian** button opens the help file for Proficy Historian, which explains how to configure, maintain and retrieve data from the Historian archive.
- The **Win 911/411** button opens the help file for the Win 911/411 alarm notification system.
- The **I/O Driver** button opens help for the associated I/O drivers.
- The **LARS** button opens the LARS (LabWatch Alarm Reporting System) help file to assist users in creating reports of historical data.

## 5.2 Administrative Utilities

Users can also access (when logged in as an administrator) administrative utilities for LabWatch and Win 911/411. Here they can enter, modify, or delete user or group information; save, reload or manage a database; and check other controls.

- The **iFIX Administrator** button opens the iFIX System Utilities window, where you can perform a variety of administrative tasks: save and load databases; add or delete tags, users, groups or alarm areas; maintain the database, the Proficy Historian and OPC Client; and obtain troubleshooting data.
- The **Win 911/411** button allows access to the Win 911/411 utility.
- The **System Configuration** button opens a window for administrators to enable or disable the Electronic Signature function.
- The **Enable/Disable Alarms** button opens the Bulk Change Alarm Enable Status window, which allows you to enable or disable all the alarms in a specific alarm area, or specific alarms within that area.

## 5.2 Administrative Utilities (cont.)

At the right are two User Function buttons:

- The **Login User** button enables you to log in as an assigned user (rather than as "Guest").
- The **Logout User** button enables you to close your session as an assigned user.

Finally, the red **Exit Application & Shutdown iFIX** button allows you to close the LabWatch Pro program.

## 5.3 iFIX System Utilities Window

***IMPORTANT:*** *You must have Administrator privileges to enter this screen and the related utilities.*

When you click on the iFIX Administrator button from the System Administration screen (and enter your Administrator user name and password), the iFIX System Utilities window (Figure 20 below) opens.Ten buttons access specific LabWatch Pro administrative utilities.

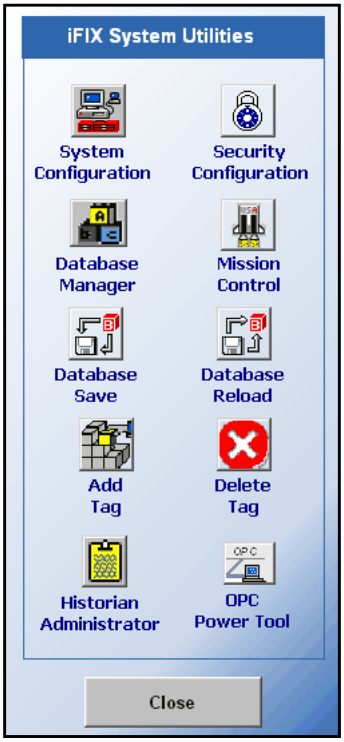


**Figure 20: iFIX System Utilities Window**

- **System Configuration** – opens the SCU (System Configuration Unit) window. The graphic displays the current node, PDB and software version. Users can create a new configuration or load or save an existing one, add configuration file descriptions or create reports. They can also configure SCADA, paths, alarms, security, SQL, tasks, alarm area databases or the auto alarm manager.

## 5.3 iFIX System Utilities Window (cont.)

- **Database Manager** – opens the current database listing. Administrators can save and reload databases; add, modify or delete block types; edit the database; verify or summarize the database; check and enter the drivers; and modify options and properties.
- **Database Save** – allows administrators to save the database for a selected node.
- **Add Tag** - allows administrators to add a new tag to the LabWatch Pro system.
- **Historian Administrator** – enables administrators to manage the Proficy Historian Administrator. (For further information, refer to the Proficy Historian HELP file.)
- **Security Configuration** – enables administrators to manage user and group accounts, the security configuration, automatic login, and name security areas. Through this option, users can: add, modify or delete users, and modify the security areas and applications available to particular groups.
- **Mission Control** – lists specific parameters used in troubleshooting.
- **Database Reload** – reloads the database for a selected node
- **Delete Tag** - allows administrators to delete a tag from the LabWatch Pro system.
- **OPC Power Tool** - enables users to set up and maintain the OPC Client I/O driver. You can specify the properties of servers, groups and items.

***Note:*** *Further details on these functions are available in the iFIX online HELP.*

## 5.4 Typical Administrative Functions

While the System Utilities option enables users to handle a wide range of functions, many administrators will only need to perform certain tasks. This section covers some basic administrative functions:

- Adding, modifying or removing users or user groups
- Adding or removing tags
- Adding or removing alarm areas
- Saving or reloading databases

***IMPORTANT:*** *You must have assigned privileges to perform these functions.*

### 5.4.1 Adding, Modifying or Deleting User Accounts

***Note:*** *Further details on these functions are available in the iFIX online HELP.*

**To add a user to the user list**:

1. From the System Administration screen, click on **iFIX Admin. Functions,** and then click on the **Security Configuration** option. The Security Configuration window (Figure 21 below) opens.

**Figure 21: Security Configuration Window**

## 5.4.1 Adding, Modifying or Deleting User Accounts (cont.)

**2.** From the Security Configuration window, go to the **Edit** menu, and click on **User Accounts**. The User Accounts window (Figure 22 below) opens.

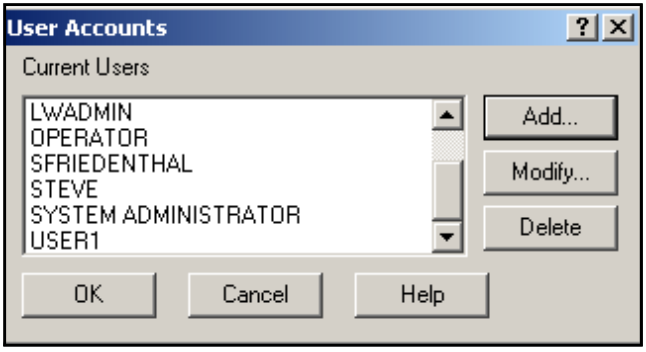


**Figure 22: User Accounts Window**

**3.** From the User Accounts option, click the **Add** button. The User Profile window opens.

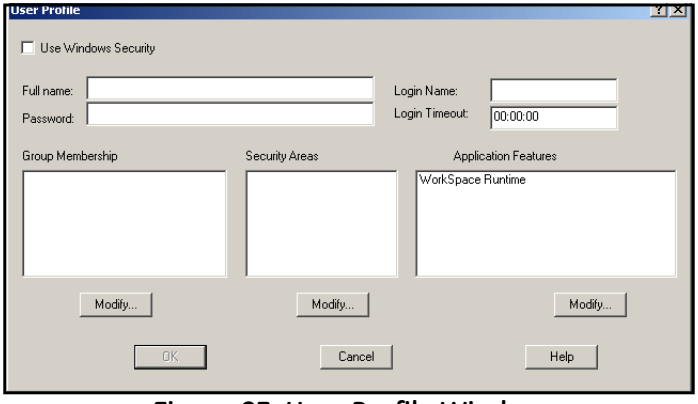


**Figure 23: User Profile Window**

**4.** Enter the full name, the password, the login name and timeout time in the appropriate text boxes.

## 5.4.1 Adding, Modifying or Deleting User Accounts (cont.)

5. To assign a user group privileges, click the **Modify** button under the Group Membership pane. The Group Membership Selection window opens. From the list of Available groups (in the bottom pane), highlight the group to which you wish to assign the new user, and click **Add**. The group is added to the Authorized window (top pane). (If you wish to assign the user to all available groups, click **Add All**.) Click **OK** to confirm the change.

6. To assign a user access to specific security areas, click the **Modify** button under the Security Areas pane. The Security Area Selection window opens. From the list of Available areas (in the bottom pane), highlight the area to which you wish to assign the new user, and click **Add**. The area is added to the Authorized window (top pane). (If you wish to assign the user to all available areas, click **Add All**.) Click **OK** to confirm the change.

7. To enable a user to perform certain functions, click the **Modify** button under the Application Features pane. The Application Feature Selection window opens. From the list of Available features (in the bottom pane), highlight the features you wish the new user to have, and click **Add**. The feature is added to the Authorized window (top pane). (If you wish to assign the user all available features, click **Add All**.) Click **OK** to confirm the change.

8. When you have finished assigning privileges, click **OK** on the User Profile screen. Enter the user password, and click **OK** to confirm the change.

**To modify privileges for a current user:**

1. From the System Administration screen, click on **iFIX Admin. Functions**, and then click on the **Security Configuration** option (Figure 21 on page 34).

2. From the Security Configuration window, go to the **Edit** menu, and click on **User Accounts (**Figure 22 on page 35).

3. From the User Accounts option, highlight a specific user and click the **Modify** button. The User Profile window (Figure 23 on page 35) opens.

4. Enter the full name, the password, the login name and timeout time in the appropriate text boxes.

## 5.4.1 Adding, Modifying or Deleting User Accounts (cont.)

5. To modify a user's group privileges, click the **Modify** button under the Group Membership pane. The Group Membership Selection window opens. From the list of Available groups (in the bottom pane), highlight the group to which you wish to assign the new user, and click **Add**. The group is added to the Authorized window (top pane). (If you wish to assign the user to all available groups, click Add All.) If you wish to remove the user from a group, highlight the group in the Authorized window, and click **Delete**. (If you wish to remove the user from all groups, click **Delete All**.) Click **OK** to confirm the change.

6. To modify user access to specific security areas, click the **Modify** button under the Security Areas pane. The Security Area Selection window opens. From the list of Available areas (in the bottom pane), highlight the area to which you wish to assign the new user, and click **Add.** The area is added to the Authorized window (top pane). (If you wish to assign the user to all available areas, click **Add All**.) If you wish to remove areas, highlight an area in the Authorized window, and click **Delete**. (If you wish to remove the user from all available areas, click **Delete All**.) Click **OK** to confirm the change.

7. To modify user functions, click the **Modify** button under the Application Features pane. The Application Feature Selection window opens. From the list of Available features (in the bottom pane), highlight any features you wish the user to have, and click **Add**. The feature is added to the Authorized window (top pane). (If you wish to assign the user all available features, click **Add All**.) If you wish to remove functions, highlight a function in the Authorized window, and click **Delete**. (If you wish to remove the user from all functions, click **Delete All**.) Click **OK** to confirm the change.

8. When you have finished modifying privileges, click **OK** on the User Profile screen. Enter the user password, and click **OK** to confirm the change.

**To delete a user from the list**:

1. From the System Administration screen, click on **iFIX Admin. Functions**, and then click on the **Security Configuration** option (Figure 21 on page 34).

2. From the Security Configuration window, go to the **Edit** menu, and click on **User Accounts (**Figure 22 on page 35).

3. From the User Accounts option, highlight a specific user and click the **Delete** button.

4. A window asks for confirmation. Click **Yes**.The user has been deleted from the list.

### 5.4.1 Adding, Modifying or Deleting User Accounts (cont.)

**Figure 24: Deletion Confirmation Box**

### 5.4.2 Adding, Modifying or Deleting Group Accounts

**To add a group to the group list:**

1. From the System Administration screen, click on iFIX Administrator and then click on the Security Configuration option (Figure 21 on page 34).
2. From the Security Configuration window, go to the **Edit** menu, and click on **Group Accounts**. The Group Accounts window (Figure 25 below) opens.

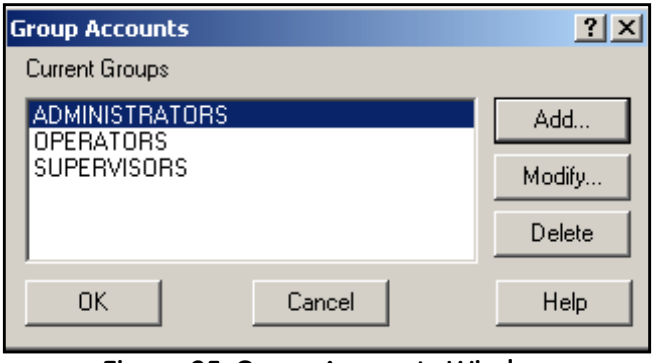


**Figure 25: Group Accounts Window**

3. From the Group Accounts option, click the Add button. The Group Profile window (Figure 26 on page 39) opens.
4. Enter the new group name in the text box.

## 5.4.2 Adding, Modifying or Deleting Group Accounts (cont.)

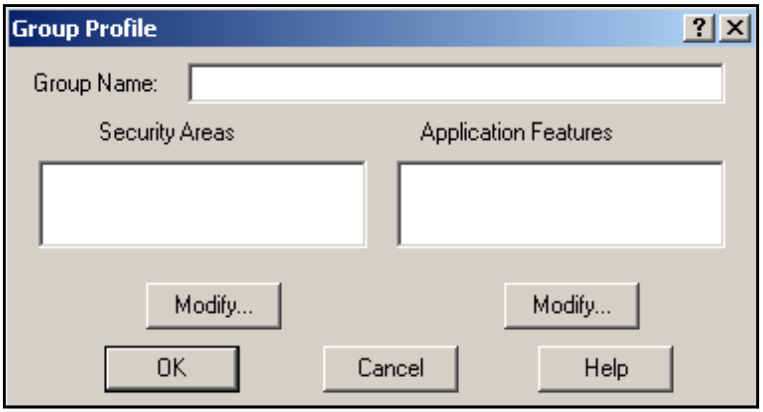


**Figure 26: Group Profile Window**

5. To assign a group access to specific security areas, click the **Modify** button under the Security Areas pane. The Security Area Selection window opens. From the list of Available areas (in the bottom pane), highlight the area to which you wish to assign the new user, and click **Add.** The area is added to the Authorized window (top pane). (If you wish to assign the user to all available areas, click **Add All**.) Click **OK** to confirm the change.

6. To enable a group to perform certain functions, click the **Modify** button under the Application Features pane. The Application Feature Selection window opens. From the list of Available features (in the bottom pane), highlight the features you wish the new user to have, and click **Add**. The feature is added to the Authorized window (top pane). (If you wish to assign the user all available features, click **Add All**.) Click **OK** to confirm the change.

7. When you have finished assigning privileges, click **OK** on the Group Accounts screen. Enter the user password, and click **OK** to confirm the change.

## 5.4.2 Adding, Modifying or Deleting Group Accounts (cont.)

**To modify privileges for a current group:**

1. From the System Administration screen, click on **iFIX Administrator**, and then click on the **Security Configuration** option.
2. From the Security Configuration window, go to the **Edit** menu, and click on **Group Accounts**.
3. From the Group Accounts option, highlight a specific group and click the **Modify** button. The Group Profile window opens.
4. Change the name, if necessary, in the text box.
5. To modify group access to specific security areas, click the **Modify** button under the Security Areas pane. The Security Area Selection window opens. From the list of Available areas (in the bottom pane), highlight the area to which you wish to assign the group, and click **Add**. The area is added to the Authorized window (top pane). (If you wish to assign the group to all available areas, click **Add All**.) If you wish to remove areas, highlight an area in the Authorized window, and click **Delete**. (If you wish to remove the group from all available areas, click **Delete All**.) Click **OK** to confirm the change.
6. To modify group functions, click the **Modify** button under the Application Features pane. The Application Feature Selection window opens. From the list of Available Features (in the bottom pane), highlight any features you wish the group to have, and click **Add.** The feature is added to the Authorized window (top pane). (If you wish to assign the group all available features, click **Add All**.) If you wish to remove functions, highlight a function in the Authorized window, and click **Delete**. (If you wish to remove the group from all functions, click **Delete All**.) Click **OK** to confirm the change.
7. When you have finished modifying privileges, click **OK** on the Group Profile screen. Enter the user password, and click **OK** to confirm the change.

## 5.4.2 Adding, Modifying or Deleting Group Accounts (cont.)

**To delete a group from the list:**

1. From the System Administration screen, click on **iFIX Admin. Functions,** and then click on the **Security Configuration** option.
2. From the Security Configuration window, go to the **Edit** menu, and click on **Group Accounts**.
3. From the Group Accounts option, highlight a specific group and click the **Delete** button.
4. A window asks for confirmation. Click **Yes.** The group has been deleted from the list.

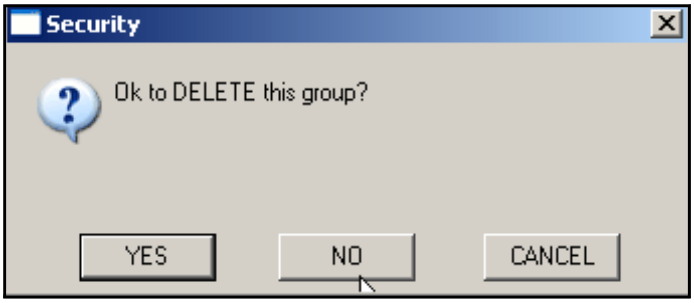


**Figure 27: Delete Group Confirmation Box**

### 5.4.3 Adding or Removing a Tag

If your LabWatch Pro system configuration changes, you can add or delete a tag.

***Note:*** *If you use Netpac, but do not add Netpac drivers to the driver list, errors will occur in assigning tags.*

**To add a tag:**

1. From the System Administration screen, click on **iFIX Administrator** and then click on the **Add Tag** option.
2. The **Add New iFIX Database Tag** window (Figure 28 below) opens. From the **Node Name** drop-down list, click on the node to which you want to add the tag.

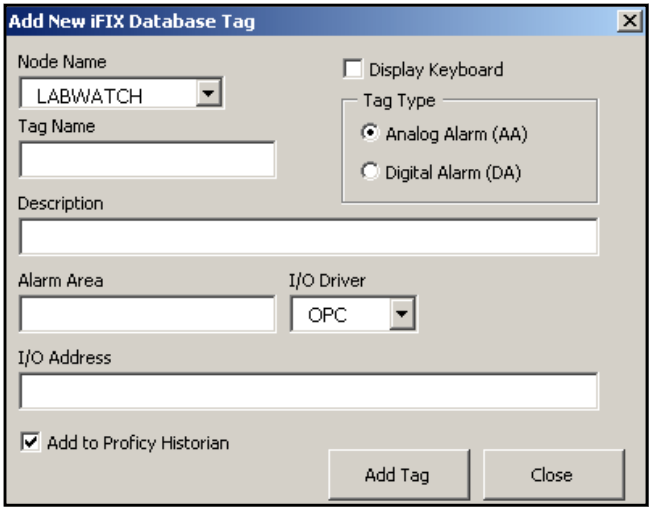


**Figure 28: Add New iFIX Database Tag**

3. In the Tag Type section, click on the option button for either an analog or digital alarm, as needed.
4. In the text boxes, enter the desired **Tag Name, Description, Alarm Area, I/O Driver** and **I/O Address**.(To enter letters through the mouse, click on the **Display Keyboard** checkbox. A virtual keyboard appears on screen.) Appendix B has a sample I/O address.
5. If you want to add this tag to Proficy Historian, click on the **Add to Proficy Historian** checkbox.

## 5.4.3 Adding or Removing a Tag (cont.)

6. When you have completed entering data, click **Add Tag.** Then click **Close** to close the window.

**To delete a tag**:

1. From the System Administration screen, click on **iFIX Administrator** and then click on the **Delete Tag** option.
2. The **Remove an iFIX Tag** window opens. From the **Node Name** drop-down list, click on the node from which you want to delete the tag.

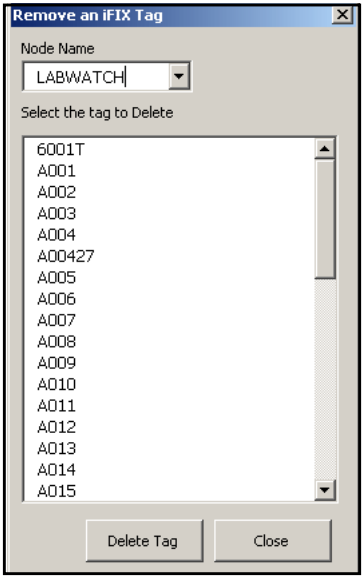


**Figure 29: Remove an iFIX Tag Window**

3. In the **Select the tag to delete** drop-down list, click on the tag you want deleted.
4. When you have highlighted the tag, click **Delete Tag.** LabWatch asks for confirmation. Click **Yes.**
5. A message explains that to confirm deletion, you must save the database. On the **iFIX Administrator** screen, click on the **Save Database** option. LabWatch saves the database and confirms the deletion.

### 5.4.4 Adding or Removing an Alarm Area

**To add an alarm area to the alarm area list**:

1. From the System Administration screen, click on **iFIX Administrator**, and then click on the **System Configuration** option.
2. From the Security Configuration window, go to the **Configure** menu, and click on **Alarm Area Database.**
3. From the Alarm Area Database option, click the **Add** button.
4. Enter the new alarm area name in the text box.
5. When you have finished, click **OK** on the Alarm Area Database screen. Enter the user password, and click **OK** to confirm the change.

***Note:*** *You must assign tags to the new alarm area; see "Configuring Alarms" on page 14.*

**To modify (rename) a current alarm area:**

1. From the System Administration screen, click on iFIX Administrator, and then click on the **System Configuration** option.
2. From the Security Configuration window, go to the **Configure** menu, and click on **Alarm Area Database**.
3. From the Alarm Area Database option, highlight a specific area and click the **Modify** button.
4. Change the name in the text box.
5. When you have finished modifying privileges, click **OK** on the Alarm Area Database screen. Enter the user password, and click **OK** to confirm the change.

***Note:*** *The tags in the modified area return to the default setting.*

**To delete an alarm area from the list:**

1. From the System Administration screen, click on **iFIX Administrator**, and then click on the System Configuration option.
2. From the **Configure** menu, click **Alarm Area Database**.

### 5.4.4 Adding or Removing an Alarm Area (cont.)

3. The Edit Alarm Area Database window appears. Click on the area you want to delete, then click the **Delete** button and **OK**.

***Note:*** *Be sure you have reassigned any tags you want to retain.*

4. Enter the user password, and click **OK** to confirm the change.

The Monitoring screen should no longer show the area. Refresh the System Monitoring screen by clicking the Monitor button twice.

### 5.4.5 Saving and Reloading Databases

To save the current database:

1. From the System Administration screen, click on **iFIX Administrator**, and then click on the **Database Save** option.
2. A screen prompts you to save a specific node. Highlight the node you wish to save, and click **OK**.
3. The Electronic Signature screen opens. Add a comment, and confirm the save by entering your user name and password.
4. Another screen confirms the save. Click **OK** to return to the iFIX Administrator window.

To reload an existing database:

1. From the System Administration screen, click on **iFIX Administrator**, and then click on the **Database Reload** option.
2. A screen prompts you to reload a specific node. Highlight the node you wish to reload, and click **OK**.
3. The Electronic Signature screen opens. Add a comment, and confirm the reload by entering your user name and password.
4. Another screen confirms the reload. Click **OK** to return to the iFIX Administrator window. You can refresh the System Monitoring screen by clicking the **Monitor** button twice.

## 5.5 Exiting and Closing LabWatch Pro

You can exit and close LabWatch Pro on your PC only if you have been assigned the appropriate privileges in your user account. To exit the application:

1. Click on the red button **Exit Application and Shutdown iFIX** at the lower right of the System Administration screen.
2. The Electronic Signature screen opens. Add a comment, and confirm the closure by entering your user name and password.

The splash screen briefly appears as LabWatch Pro closes.

# Appendix A. RF ValProbe Sensor Location Structure

When you move an RF ValProbe sensor to a new location, the basic structure is:

Server"A";Group”B”;RF”C”.Base"D.;"E"."F”;No Access Path

- “A” is an arbitrary number assigned to the server software by default (for example, 1)
- “B” is an arbitrary number assigned to the group for this input. Each input will have a unique group name assigned. This number will normally remain the same for each tag.
- “C” is an arbitrary number assigned within the address for the OPC driver. By default, this is left at RFa.
- “D” is a unique identifier assigned to recognize what base station is assigned to the group of sensors. Each sensor has a dial on the back that must match the base station identifier. An IP address will be linked to each identifier. For further details, refer to the RF ValProbe User's Manual or the OPC Server HELP.
- “E” is the serial number of the RF ValProbe.
- “F” is the sensor type. Each type of input will be identified as to the type of sensor collecting data. For example:

X2575 — TA, TB, TC, TD, TE to identify which RTD channel is collecting data

X2570 — T for Temperature, RH for Relative Humidity

X2571— T for Temperature, RH for Relative Humidity, AI for Voltage Input, DI for Contact Closure

X2572 — T for Temperature, RH for Relative Humidity, AI for Current Input, DI for Contact Closure

A typical sensor structure is: Server1;Group3;RFa.Base1.B00000.TA;NoAccessPath.

[no content intended for this page - proceed to next page]

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M4575 Rev. B